

1. A passive optical coupler comprising:

and arranged to couple each of said input ports to the output port of each other input and output port pair.

2. ~~A~~ passive optical coupler comprising:

wherein each input port is coupled to all output ports other than its corresponding output port.

3. A communications access network comprising a passive optical coupler according to claim 1.

4. A communications network comprising a passive optical coupler according to claim 1.

5. A passive optical network arrangement comprising:

a head-end station;

at least one subscriber station;

a passive optical network providing optical connectivity from each of said stations to each other station;

wherein said subscriber stations are arranged to transmit on a common optical frequency distinct from that on which said head-end station is arranged to transmit, and each of said subscriber stations is arranged to detect when another of said subscriber stations is transmitting on said common optical frequency over said passive optical network, and in which the passive optical network comprises a passive optical coupler according to claim 1.

6. A passive optical network arrangement according to claim 5 in which the subscriber station communicates with the head-end station using a carrier sense/collision detection protocol.

9. A passive optical network arrangement according to claim 5 in which the passive optical network provides optical connectivity from each of said stations back to itself.

a passive star coupler connected by means of point-to-point optical links to each of the stations.

12. A telecommunications access network comprising a passive optical network arrangement according to claim 5.

13. A telecommunications network comprising a passive optical network arrangement according to claim 5.

a transmitter arranged to transmit data on a first optical frequency;

a transmission detector arranged to receive, on said first optical frequency, signals from a network indicative of a transmission by another subscriber station on said first frequency;

a medium access logic unit arranged to prevent transmission on said first frequency while said transmission detector is detecting said signals from a network indicative of a transmission by another subscriber station on said first frequency.

a receiver arranged to receive data on a second optical frequency.

at least one of the subscriber stations detecting when another of said subscriber stations is transmitting on said common optical frequency over said ~~passive optical network~~

transmitting data on a first optical frequency;

5 preventing transmission on said first frequency while said transmission detector is detecting said signals from a network indicative of a transmission by another subscriber station on said first frequency.

a plurality of subscriber station:

wherein said subscriber stations are arranged to transmit on a common optical frequency, and each of said subscriber stations is arranged to detect when another of said subscriber stations is transmitting on said common optical frequency over said passive optical network, and in which the passive optical network comprises a passive optical coupler according to claim 1.

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